

Vocal Nodules in Children

What are vocal nodules?

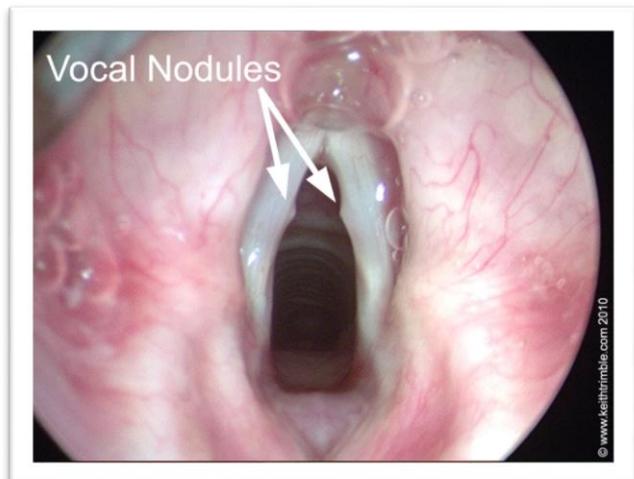
Vocal nodules are the most common cause of chronic hoarseness in children. They are benign swellings at the junction of the anterior and middle thirds of the vocal folds. In the early stages they are soft and pliable, later becoming larger and fibrotic. There is some evidence that vocal fold immaturity in children increases their susceptibility to vocal nodules.

What are the symptoms and signs of vocal nodules?

The presenting symptom is hoarseness, with occasional coughing and frequent throat clearing. The hoarseness is exacerbated with increased voice use during the day and with deterioration of the condition. If the nodules are large, habitual pitch (fundamental frequency of the child's voice) may be lowered considerably (voice sounds deeper).

How are vocal nodules diagnosed?

The diagnosis of vocal nodules can be suspected clinically and is usually confirmed using a flexible telescope or fibre-optic laryngoscope. This is a flexible tube that contains light carrying fibres that is passed through the nose and allows the doctor to view the voice box. This procedure is performed in the clinic with the child awake. After a detailed examination the ENT surgeon will be able to confirm the diagnosis or else suggest an examination under anaesthetic to rule out laryngeal papillomas or vocal cord cysts.



How are vocal nodules managed?

The treatment and the evaluation of vocal nodules in adults have been based on a few underlying principles: voice rest, speech therapy, treatment of reflux disease, and evaluation for other aetiologies that result in nodules. Much of the treatment of vocal nodules in paediatric patients has been extrapolated from the extensive work done on this topic in adults. Currently, the treatment for paediatric vocal nodules is not standardised. This is due to the fact that (1) there are no significant studies assessing paediatric vocal nodules and (2) the lack of an objective evaluation system for paediatric nodules. It is unknown at present if the severity of a child's hoarseness correlates with the size of his or her vocal nodules. Greater understanding of the correlation between perceptual qualities of voice and physical characteristics of vocal fold nodules will lead to more rational and effective treatment regimens.

Does speech therapy work for vocal nodules in children?

There have been no conclusive studies identifying the best treatment for vocal nodules. Despite the lack of conclusive evidence for voice therapy (SALT) it should always be considered as a first line option. Conservative treatment is always favoured to surgery in children, as the condition can be self-limiting and surgery on the vocal folds can be harmful. There may be improvement with puberty as the structure and function of the larynx changes. Changes in other predisposing factors such as patterns of voice abuse and misuse or emotional state can also affect cure.